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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,909	02/25/2000	Keith Russell Edwards	476-1568.1	7736

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EXAMINER
NGUYEN, HUY D

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 08/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/512,909	EDWARDS ET AL.	
	Examiner	Art Unit	
	Huy D Nguyen	2684	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-22 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☑ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☑ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 08/955,862

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8, 9, 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, 9, 18, and 19 there is no antecedent basis for "the chip rate".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1, 3, 6, 7, 10, 11, 13, 16, 17, 20, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelton et al. (U.S. Patent No. 5,926,503) in view of Patsiokas et al. (U.S. Patent No. 5,430,769).

Regarding claim 1, 11, 21, 22 Kelton et al. disclose an input stage 106 of a mobile station 104 including a first antenna 130 for receiving communication signals and producing first signals and a second antenna 132 for receiving communication signals and producing second signals (see Col. 5, lines 66-67 and Col. 6, lines 1-2), a switch 146 (see Col. 6, line 44), a switch control circuit 144 (see Col. 6, line 45). The mobile station 104 comprises an input stage 106, a combiner 116 (see Col. 3, lines 44-47). At step 510, the method includes combining the first signals and the delayed signals to produce combined signals (see Col. 8, line 52-54). At step 512, the method determines if a predetermined criterion is met. The predetermined criterion is any suitable standard or algorithm for determining when the second antenna and delay should be included and the delayed signals combined. This is preferably a function of the estimated channel delay spread profile. When few significant discernible rays are present, the second antenna will be active. When considerable significant discernible rays are present, the second antenna will be removed to prevent increases in intracell interference (see Col. 8, lines 58-67). Kelton et al. do not disclose that the switch operates on a fast switching basis. Patsiokas et al. teach that the switch needs to perform quickly to switch antennas. It would have been obvious to include a switch that performs quickly as disclosed in Patsiokas et al. (see Col. 1, lines 61-62) since that would help the system prevent loss of user communications.

Regarding claims 3, 13 it is obvious that spatial diversity is employed in Kelton et al.'s receiver since there are two antennas installed on it (see Col. 5, lines 66-67 and Col. 6, lines 1-2).

Regarding claims 6, 16 Hysteresis is not employed in Kelton et al. Patsiokas et al. employ the use of Hysteresis (see Col. 3, lines 55-62). It would have been obvious to employ Hysteresis as disclosed in Patsiokas et al. since it would help prevent rapid switching.

Regarding claims 7, 10, 17, 20 Kelton et al. disclose a RAKE receiver 112 (see Col. 3, lines 44-47).

Claim 2, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelton et al. (U.S. Patent No. 5,926,503) in view of Patsiokas et al. (U.S. Patent No. 5,430,769) and in further view of Anvari(U.S. Patent No. 5,461,646).

Regarding claim 2, 12 Kelton et al. and Patsiolas et al. do not disclose that only signals with high SNR should be selected. Anvari teaches to select signals with high SNR . It would have been obvious to optimize the signal selection by selecting only signals with high SNR, as disclosed by Anvari (see Col. 1, lines 62-67 and Col. 2, lines 1-2) since selecting only signals with high SNR would help the system receive the strongest signal from the signal source.

Claim 4, 5, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelton et al. (U.S. Patent No. 5,926,503) in view of Patsiokas et al. (U.S. Patent No. 5,430,769) and in further view of Lee(U.S. Patent No. 5,818,543).

Regarding claim 4, 14 Kelton et al. and Patsiokas et al. do not disclose the use of polarisation diversity. Lee discloses that in spatial diversity systems, two antennae are positioned apart with the intent that the reflected signals at the antenna locations will not cancel the desired signal at the same time. It would have been obvious to use polarisation diversity to differentiate

signals as disclosed by Lee(see Col. 1, lines 53-55) since such method would improve the receive system gain and to reduce the effect of fading.

Regarding claim 5, 15 Kelton et al. and Patsiokas et al. do not disclose both spatial and polarisation diversity. Lee teaches that in spatial diversity systems, two antennae are positioned apart with the intent that the reflected signals at the antenna locations will not cancel the desired signal at the same time. In polarity diversity systems, both horizontally and vertically polarized antennae are used with switching between the two for the better signal. It would have been obvious to use both spatial and polarisation diversity to differentiate signals as disclosed by Lee(see Col. 1, lines 53-58) since such technique would provide diversity gain.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Chang et al. U.S. Patent No. 5,692,019.
- Schilling U.S. Patent No. 5,926,502.
- Fuerter U.S. Patent No. 6,125,109.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy D Nguyen whose telephone number is 703-305-3283. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-6750.

HN
July 24, 2002